

REMARKS

Applicant respectfully requests the Examiner's reconsideration of the present application. Claims 1-28 are pending. Claims 11 and 23 have been cancelled. Claims 1, 13, 24 and 25 have been amended. No new claims have been added. Therefore, claims 1-10, 12-22 and 24-28 are presented for examination.

Claim Amendments

Applicant has amended the claims to more particularly point out what Applicant regards as their invention. No new matter has been added as a result of these amendments.

Rejections Under 35 U.S.C. §101

Claims 1-2 stand rejected under 35 U.S.C. §101 as being directed to non-statutory subject matter. Applicant respectfully submits that independent claim 1, as amended, complies with 35 U.S.C. §101. Accordingly, Applicant respectfully requests that the rejection be withdrawn.

Rejections Under 35 U.S.C. §102

Thuyen Le

The Examiner has rejected claims 1-5, 12-17 and 24-27 under 35 U.S.C. §102(b), as being anticipated by Thuyen Le et al., "A New Flexible Architecture for Variable Length DC Targeting Shape-Adaptive Transform," ("Thuyen

Le"). Applicant respectfully submits, however, that the present claims are not anticipated by Thuyen Le.

Thuyen Le discloses a 1D DCT architecture which employs a Canonical-Signed-Digit serial multiplication to reduce hardware resources. Independent claims 1, 13 and 25 include the limitation of "implemented using machine-implemented Packed Multiply and Add (PMADDWD) instructions." Applicant respectfully submits that Thuyen Le does not disclose this limitation. Accordingly, it is respectfully submitted that claims 1, 13 and 25 and claims 2-5, 12, 14-17, 24, 26 and 27 that depend from them, are not anticipated by Thuyen Le. Therefore, Applicant respectfully requests the withdrawal of the rejection of the claims.

Rejections Under 35 U.S.C. §103(a)

Thuyen Le in view of Huang

Claims 6-8, and 18-20 stand rejected under 35 U.S.C. §103(a) as being obvious over Thuyen Le in view of Huang, U.S. Patent No. 5,610,849 ("Huang"). Applicant respectfully submits that the present claims are patentable over the combination of Thuyen Le and Huang.

Claims 6-8 depend from claim 1, and claims 18-20 depend from claim 13. As discussed above, Thuyen Le does not teach or suggest the limitation of "implemented using machine-implemented Packed Multiply and Add (PMADDWD) instructions." Applicant respectfully submits that Huang also does not teach or suggest the missing elements. Huang discloses a 2-D DCT/IDCT circuit consisting of two 1-D processors, which performs two successive 1-D DCT/IDCT processes to achieve a 2-D

transformation. (Huang, Figure 1, col. 1, ll. 42-50). However, Huang does not teach or suggest using Packed Multiply and Add (PMADDWD) instructions, as claimed.

Therefore, the combination of Thuyen Le and Huang does not teach or suggest the limitations of claim 1 or claim 13. Accordingly, Applicant respectfully submits that claims 6-8 and 18-20 are not rendered obvious by the combination of Thuyen Le and Huang, and respectfully request the withdrawal of the rejection of the claims.


Rejections Under 35 U.S.C. §103(a)

Thuyen Le in view of Dulong

Claims 9-11, 21-23, and 28 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Thuyen Le in view of Dulong, et al., U.S. Patent No. 5,983,257 ("Dulong"). Applicant respectfully submits that the present claims are patentable over the combination of Thuyen Le and Dulong.

Claims 9-11 depend from claim 1, claims 21-23 depend from claim 13, and claim 28 depends from claim 25. As discussed above, Thuyen Le does not teach or suggest each and every limitation of independent claims 1, 13 and 25.

Applicant respectfully submits that Dulong is disqualified as prior art under 35 U.S.C. §103(c) because the present patent application and Dulong were, at the time the invention of the present application was made, owned by or subject to an obligation of assignment to Intel Corporation. In support of this assertion, Applicant respectfully submits evidence in **Appendix A** of this response. Because Thuyen Le does not teach or suggest every limitation of the claims and Dulong is disqualified as prior art under



35 U.S.C. §103(c), Applicant respectfully requests the withdrawal of the rejection of claims 9-11, 21-23, and 28 under 35 U.S.C. §103(a).

Rejections Under 35 U.S.C. §103(a)

Thuyen Le

Claims 9-10, 21-22, and 28 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Thuyen Le in view of the Examiner's asserted Official Notice.

Applicant respectfully submits that the present claims are patentable over Thuyen Le and the asserted Official Notice.

Claims 9-10 depend from claim 1, claims 21-22 depend from claim 13, and claim 28 depends from claim 25. For at least the reasons discussed above, Thuyen Le does not teach or suggest each and every limitation of independent claims 1, 13 and 25.

Furthermore, the Examiner's asserted Official Notice that SIMD operations and/or MMX operations were well known in the art for operating multiple data in a single instruction, does not disclose the missing element. Accordingly, Applicant respectfully submits that claims 9-10, 21-22, and 28 are not rendered obvious by Thuyen Le in view of the Examiner's asserted Official Notice, and respectfully request the withdrawal of the rejection of the claims.

Conclusion

Applicant respectfully submits that in view of the amendments and discussion set forth herein, the applicable rejections have been overcome and the pending claims are in condition for allowance.

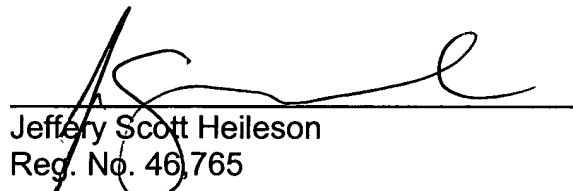
If the Examiner determines the prompt allowance of the claims could be facilitated by a telephone conference, the Examiner is invited to contact Scott Heilesen at (408) 720-8300.

Authorization is hereby given to charge our Deposit Account No. 02-2666 for any charges that may be due. Furthermore, if an extension is required, then Applicant hereby requests such extension.

Respectfully submitted,

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Date: 12/3, 2003



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APPENDIX A

Statement of Common Ownership

The present patent Application No. 09/676,556 and United States Patent 5,983,257 to Dulong et al. were, at the time the invention of Application No. 09/676,556 was made, owned by or subject to an obligation of assignment to Intel Corporation of Santa Clara, California.

Evidence of Common Ownership

In support of the above statement, Applicant respectfully submits the following evidence:

- 1) An assignment of the present Application to Intel Corporation, which was recorded in the United States Patent and Trademark Office on December 15, 2000, at Reel/Frame 011365/0917, a copy of which is attached.
- 2) An assignment of United States Patent 5,983,257 to Dulong et al. to Intel Corporation, which was recorded in the United States Patent and Trademark Office on June 27, 1996, at Reel/Frame 8132/0141, a copy of which is attached.